

(19) Japan Patent Office (JP)

(12) Published Patent Gazette (A)

(11) Patent Application Code

Kokai Tokkyo Koho Heisei( Published Patent Heisei) 5-164756

(43) Published date Heisei 5 (1993) June 29

(51) Int. CL <sup>5</sup>	Identified mark	Maintenance code of patent office	F1 Technical expression part
G01N	33/498	B 7055-2J	
	33/50	J 7055-2J	

Evaluation requirement				yes	item of requirement: 3 (4 pages total)
(21) Application code	Special	original	Heisei	(71) Applicant	000115991
(patent application Heisei ) 3-327751					Rohto Pharmaceutical Co., Ltd.
					1-8-1 Tatsumi-nishi, Ikuno-ku ,Osaka, Osaka Prefecture
(22) Application date	Heisei 3 (1991) Dec 11			(72) Inventor:	Koike Tetsuo
					5-5-1, Tannan, Matsubara, Oosaka Prefecture
				(72) Inventor:	Kimura Masanori
					4-2-21 Katsuyama, Tennoji-ku, Osaka, Osaka Prefecture
				(74) Agency	deputy Tsujimoto Yuchi

(54) 【Name of Invention】 Urine analyzer

(57) 【Abstract】

【Structure】 The slits 2 are designed on the main body of the urine analyzer. 2. The slits 2 stagger the positions of the outside opening 2a and the inboard opening 2b. Furthermore, the urine collection part 3 is designed below the slits 2.

【Effect】 According to the urine collection part 3 is invisible from the outside, no need to figure out the coloring of the urine, and no need to remove and install the cap as that did in previous analyzer, therefore, the operation is simple. Moreover, while the cap is not needed, causing to material saving and object-achieved, meanwhile, the step of installing the cap to the main body of the processing is not necessary any more. Thus, the cost of the producing is reduced.



**【The range of patent requirement】**

**【Requirement 1】** The character of this urine analyzer is to design the slits 2 on the main body 1, which stagger the positions of the outside opening 2a and inboard opening 2b, meanwhile, the urine collection part 3 is designed below the slits 2.

**【Requirement 2】** Between the outside opening 2a and the inboard opening 2b, it forms a connective wall 8 linking the vertical plane 8a to the horizontal plane 8b. Therefore, the slits 2 stagger the positions of the two openings, which is the character of the urine analyzer as described in Requirement 1.

**【Requirement 3】** It forms a connective wall as the slope between the outside opening 2a and the inboard opening 2b. Therefore, the slits 2 stagger the positions of the two openings, which is the character of the urine analyzer as described in Requirement 1.

**【Specification of the invention】****【0001】**

**【Industrial applied range】** This invention is related to the urine analyzer for various urine tests. By this invention, the urine collected from the urine collection part is permeated into the test sample of the inner main body, then various urine tests can be processed by confirming whether the color of the test sample changes.

**【0002】**

**【Previous techniques】** Previously, this urine analyzer is shown on chart 5, the urine collection part 3 is designed in the front bottom of the body 1 while the whole of the part 3 is covered by a removable cap 10 on the body 1. The removable cap 10 of this urine analyzer can be taken off and be put on again after collecting urine in the urine collection part 3, then, the test is carried out under the state of the urine collection part 3 being covered by the cap 10.

**【0003】** As mentioned above, when collecting urine in the urine collection part 3, it brings unpleasant and dirty feelings to the user due to the coloring by the urine in the urine collection part 3. Therefore, the cap 10 is used to cover the urine collection part 3 to make it invisible.

**【0004】**

**【The problem solved by the invention】** The operation using above urine analyzer is very inconvenient because the cap 10 has to be taken off and be put on frequently during the operation. Moreover, the material of cap 10 is different from that of the main body, thus, additional material is produced. Meanwhile, it is a necessary step of installing the cap 10 to the main body 1 in manufacturing, which increases the cost of the producing. The objective of this invention is to solve these problems.

**【0005】** The objective of the invented urine analyzer is to solve the disadvantages and problems of previous urine analyzer as mentioned above.

**【0006】**

**【Methods of solving the problem】** The slits 2 is designed on the main body 1 of the invented urine analyzer, which stagger the positions of the outside opening 2a and the inboard opening 2b, meanwhile, the urine collection part 3 is designed below the slits 2 as described above. Furthermore, between the outside

2

opening 2a and the inboard opening 2b of the slits of the invented urine analyzer as mentioned above, it forms a connective wall 8 linking the vertical plane 8a to the horizontal plane 8b, therefore, the positions of the outside opening 2a and the inboard opening 2b are staggered.

**【0007】** It forms a connective wall as the slope between the outside opening 2a and the inboard opening 2b of the slits of the invented urine analyzer as mentioned above, therefore, the positions of the outside opening 2a and the inboard opening 2b are staggered.

**【0008】**

**【Functions】** On the invented urine analyzer, although the urine collection part 3 is colored, which can not be seen and be identified from the outside due to the above slits 2 can curtain off the sight, moreover, the above slits 2 will not disturb the urine collecting.

**【0009】**

**【Applied example】** The structure of the invented urine analyzer is expatiated on the showed chart as the applied example. The charted applied example shows the urine analyzer for testing whether pregnancy presents. The main body 1 of the urine analyzer consists of two intersected parts, the upper body 1a and the inferior body 1b, and is integrated by the assembly of the two parts. Several slits 2 are designed on one bottom of the upper body 1a of the main body 1, which stagger the positions of each outside opening 2a and inboard opening 2b. Furthermore, the urine collection part 3 is designed below the slits. Meanwhile, the test sample 4 connecting to the urine collection part 3 is designed inside of the main body 1. Moreover, the pregnancy test slit 5 and saturation identification slit 6 are designed orderly on partial to the central part of the upper body 1a of the main body 1. The pregnancy test slit 5 is embedded into the transparent plate 7 and is shut while the saturation identification slit 6 is open as the connection slit.

**【0010】** On the above slits 2, which is shown on chart 3, between the outside opening 2a and inboard opening 2b of the slits of the invented urine analyzer as mentioned above, it forms a connective wall 8 linking the vertical plane 8a to the horizontal plane 8b, therefore, the positions of the two openings 2a and 2b are staggered. On chart 4, it forms a connective wall as the slope between the outside opening 2a and inboard opening 2b of the slits of the invented urine analyzer as mentioned above, therefore, the positions of the two openings 2a and 2b are staggered.

**【0011】** The above urine collection part 3 consists of the fiberglass, filter paper, sponge, polyester plastic, non-weave fabric etc, which are not specially limited if they can maintain the urine.

The pregnancy-testing drugs are soaked in the position corresponding to the pregnancy test slit 5 and the color-rendering drugs are soaked in the position corresponding to the saturation identification slit 6, on the above test sample part 4. Moreover, the test sample 4 consists of filter paper, non-weave fabric etc., which are not specially limited if they are the material easily permeable for the urine.

【0012】 The applied status is illuminated as below according to the above constructed urine analyzer. Firstly, the urine is added to the slits 2 designed in one bottom of the main body 1. then the urine is permeated into the inside of the main body 1 from the slits 2 and the urine is maintained in the urine collection part 3. After placing the urine analyzer stable for a while, the urine permeates from the urine collection part 3 to the test sample 4 and is continually permeated into the soaked pregnancy-testing drugs and color-rendering drugs of the test sample 4. Then, the coloring of color-rendering drugs being observed through the saturation identification slit 6 is confirmed and that the urine has reached the pregnancy-testing drugs is confirmed, thereafter, the result reflected by the pregnancy-testing drugs is observed through the pregnancy test slit 5.

【0013】 The invented urine analyzer is illuminated by the applied example, testing whether the pregnancy presents by the urine analyzer. Certainly, the prediction of the ovulation date, the tests of

out by t

【0014

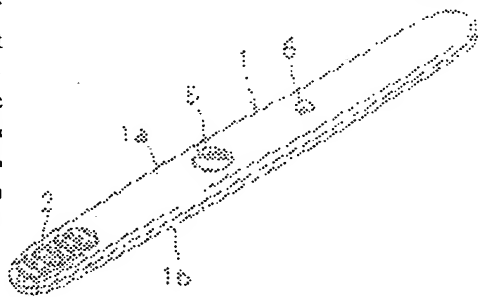
【Effect

invented

from th

of the u

previous



of the  
invisible  
coloring  
did on

【0015】 Furthermore, the cap is not needed, causing to material saving, meanwhile, the step of installing the cap to the main body of the processing is not necessary any more. Thus, the cost of production is reduced.

【Simple illumination of the chart】

【Chart 1】 To show the oblique drawing of the invented urine analyzer.

【Chart 2】 The magnified profile by the A-A line of the invented urine analyzer.

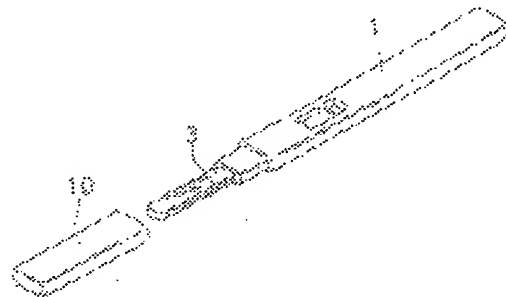
【Chart 3】 The magnified profile by the slits structure part of the invented urine analyzer.

【Chart 4】 The magnified profile by the other part of the slits structure of the invented urine analyzer.

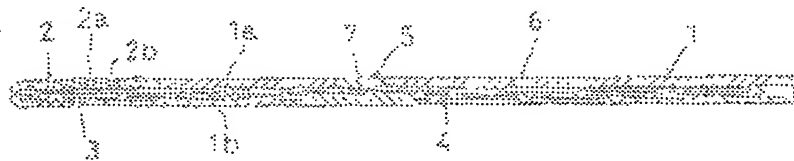
【Chart 5】 The oblique drawing of the previous urine analyzer.

【Sig

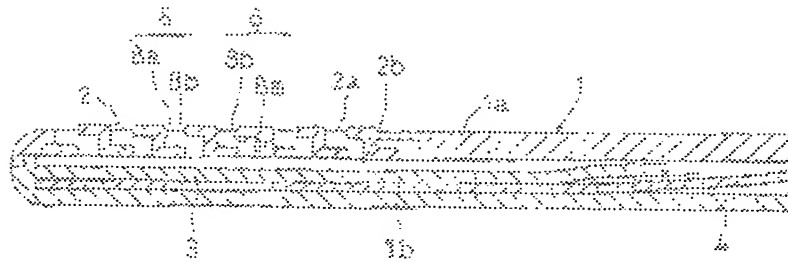
1  
2  
2a  
2b  
3  
8  
8a  
8b



【Chart 2】



【Chart 3】



【Chart 4】

